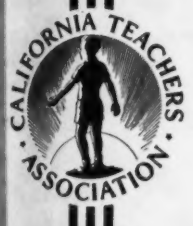

California JOURNAL OF EDUCATIONAL RESEARCH

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IN THIS ISSUE:

- Feature Article:
  Dr. Ivan A. Booker Presents Challenge to Educational Research Workers
- Pasadena Parents Forecast School Enrollments
- Digests of Research Studies:
  - — Changes in the I.Q. and M.A.
  - — Criteria for Determining Adequacy of School Districts
  - — Study of Terminal Vocational Students
  - — Vitalizing the Third-Grade Social Studies Program
  - — School Administrative Codes
  - — Teacher Behavior Most Disliked by Students
- Editorial: "We're On Our Way!"
- Suggested Research Problems
- Book Reviews
- Research News and Views

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ARTHUR F. COREY
State Executive Secretary
391 Sutter Street, San Francisco, California

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Volume I | March 1950 | Number 2

CONTENTS

PAGE

EDITORIAL 50

The Expanding Role of Research in Education: A Challenge . . . 51
Ivan A. Booker

Measuring I.Q. Changes of High School Students 56
J. Merritt Winans

Criteria for Determining Adequacy of School Districts in California 60
C. C. Carpenter

Study of Terminal Vocational Students 66
Stanley L. Combs

Parents Forecast Enrollments 71
Georgia Sachs Adams

Vitalizing the Third-Grade Social Studies Program 75
Harold Spears

California School Administrative Codes — Their Use and Format . 80
David M. Florell

Teacher Behavior Most Disliked by Students 85
H. B. Long and Lloyd Farley

SUGGESTED RESEARCH PROBLEMS 90

BOOK REVIEWS 91

RESEARCH NEWS AND VIEWS 94

THE EDITORS SAY:

We're On Our Way!

WE'VE just attended a launching! In keeping with the times, we might have spoken in rocket terms, but we shall be content to liken the new *California Journal of Educational Research* to the traditional vessel. Our ship appears to us to be seaworthy. So far as our knowledge permits, everyone has been comfortably accommodated on this first sailing.

Editorially speaking, we have just been saying that the first issue of the *California Journal of Educational Research* came off the press according to schedule. It was first seen and evaluated by the editorial board, eleven critical readers who gave the issue an official "OK." But the most severe test will be our readers' reactions. In our January editorial we said, "We hope you'll like us." Do you? If not, let us know why. We are not looking for bouquets; rather, we must have the judgments of our readers to know whether or not we are producing the type of publication that is wanted and needed.

The first issue of the Journal went to over 400 subscribers. We expect that number to increase by the time this issue comes off the press. On the subscription list appear 15 states outside California. We were pleased to note that the subscriptions include a good cross-section of professional interest: teachers, administrators, research personnel, college professors, libraries, state departments of education, state education associations, and others. We anticipate that by the end of the first year of publication, the circulation of the Journal will approach the one thousand mark. Then, perhaps, we shall boast of a rocket launching.

This suggestion may not be needed, but we propose that you save your copies of the Journal for future reference; they will serve as a good source of research information. The annual index will appear in the November issue.

The May issue will be devoted largely to a classified bibliography of California theses and dissertations that have been completed during the past year in graduate schools of education. This bibliography will become an annual feature in the May number. Extra copies of the issue will be available to colleges and universities, but orders should be received by May 1. The price of individual copies is $1.50.

The Expanding Role of Research In Education: A CHALLENGE

IVAN A. BOOKER
Research Division
National Education Association

WITH too much clockwork regularity most research workers are immersed in their daily routines. Each morning brings its round of concerns which sometimes seem trivial. Trees obscure the forest. As professionals, we tend to devolve into craftsmen. So, shall we take a look at the larger job of educational research? Where are we along the road? How far and how fast do we need to move? What directions do we take? How do we get on with the job?

On questions such as these the convictions which I propose to share with you are: (a) research in education IS in the growing stage, in the growth period of its existence; (b) research is needed on many untouched problems; (c) more people should be doing research in education; (d) the research that is done should be of better quality; and (e) wider and more effective use should be made of research findings.

Research in Education is in the Growing Stage

Education is one of the new sciences. The "science" of education is a product of the present century; it is less than fifty years old. Contrast with that the long history of many other sciences, *e.g.*, physics, chemistry, medicine, biology, geology, economics, and even historical research. Is it any wonder that research in education must claim fewer findings than the sciences which have had many centuries in which to work? I think not. On the contrary, there is reason to take pride in what has been accomplished in so short a time, especially in a field in which our measurements must be made on human relationships and responses rather than on inert matter —obviously a more difficult task. Progress has been made; results are being achieved; more can and will be accomplished.

Dr. Ivan A. Booker, assistant director of the NEA Research Division since 1931, came up through the teaching ranks before becoming a research worker. His professional experience includes teaching in the public schools of Illinois and Indiana. He also taught at the following colleges: Indiana State Normal, Reed College, Boston University, and the University of Michigan. He received his Ph.D. degree in 1934 at the University of Chicago. Dr. Booker's article is adapted from an address presented at the First Annual Conference on Educational Research which was held last October at Santa Barbara. The article appears by popular request of those who heard Dr. Booker speak.

If this appraisal is correct, we have no apologies for those who say that education can never be a real science. Our measurements will improve; our results will accumulate. Nor will we be taken in by the fallacy that "all the important jobs have been done in educational research." Many a Ph.D. candidate suspects that this is the case. But we know that it isn't, that we are just beginning. Schiller might well have been talking to us when he said:

> Far must thy researches go, Wouldst thou learn the world to know.
> Naught but firmness gains the prize; Naught but fullness makes us wise.
> Buried deep truth ever lies.

If our research is new and growing, then we must keep in mind that what we are doing is not good enough. We must seek constantly to grow with the job. And finally, as has been implied already, we have not yet "sold" the profession on the idea of educational research. Too many workers in education do not yet accept the conclusion that the way to progress in education lies in the application of the methods of science to the study of educational problems.

Research is Needed on Many New Problems

Partly because research in education is so new, only a few of the problems have yet been explored. I do not mean to imply necessarily that we need *more* studies, although that may help. Probably more important than the number of studies made is a sharper focus, a better selection of problems, an attack on the areas of greatest urgency. There should be studies of long-term and future problems as well as research on the immediate, "emergency" problems; more planning, less expediency. Probably there should be less REsearch, and more fundamental reSEARCH. Even in the most familiar areas, our knowledge is remarkably small. How few *facts*, definitely established and verified, can we claim in such areas as: child growth, the learning process, curriculum, materials of instruction, equipment, housing, school organization, class size, teaching load, and evaluation of pupil progress or evaluation of teaching efficiency? We must sharpen the focus and increase our fundamental research in these areas. Also, we need more genetic studies. Legal research is in its infancy, with only a few people working in that field and scant attention being given by training institutions to methods of research in it. These are a few of the most obvious needs.

Finally, there should be, in my opinion, a great deal more cooperation among the various sciences which touch on the welfare of children. For example, those doing research in education might very well join forces, from time to time, with the psychologists, physiologists, sociologists, arch-

itects, and engineers. Studies could be jointly planned and carried out in a cooperative way to draw on the resources of each participating group. Even those of us who work in educational research might well cooperate more often and more full than we do with: city and county bureaus; governmental agencies; the research departments of professional associations; and the research laboratories of colleges and universities.

More People Should Do Educational Research

The report on the status of California school research departments, prepared by the California Teachers Association, pointed out that even in California the provisions for research are rather meager. Many school systems have no research department and no one assigned regularly to do research in education. Space, time, and facilities are limited. Financial support for educational research is often lacking or far too small. And the situation in California, by and large, probably is much better than in most other states. The need is apparent.

Additional personnel should be set to work doing research in education. Funds should be provided to make research possible. The program of research should be taken out of the "fads and frills" category where it now rests in far too many school systems. It is not something to be supported "if there are funls left from the regular school program." When research is well done, no phase of the school program is more essential. The "R" in research ranks in importance with the familiar "3 R's."

Along the same line, we need to improve the status of research workers. Too often they are classed as chore boys whose sole function is to find quick and reasonably accurate answers to other people's questions. In my judgment, that is unfortunate. Research workers worthy of the name should be "professionals." Their status should be comparable to that of other members of the planning and policy-making team. They should be the *askers* as well as the *answerers* of questions. They should be the stimulators and counselors of staff members who engage in research work, just as instructional supervisors give leadership in their respective fields.

Every teacher should be a researcher. Not every one will be an expert on research techniques. But every teacher should be essentially a scientist and approach the work of teaching with the spirit of inquiry. The methods of science are, after all, rather simple: (a) awareness of problems, (b) collection of objective facts and observations, (c) logical and analytical thinking which leads to certain tentative generalizations from the facts, and (d) evaluation and revision of one's conclusions in the light of further evidence. Such an approach is a reasonable one to expect of any teacher. It was one of the ancients, Marcus Aurelius, who said, "Nothing has such power to broaden the mind as the ability to investigate systematically all that comes under one's observation."

If we are to have more people doing research in education on a full-time basis, if research is to be supported adequately, if the status of research workers is to be improved as I have suggested, and if teachers are to adopt the essential methods of research in all their work, better professional preparation is implied — both preservice and inservice. Lack of proper training is not the least of the reasons for the present research shortages which have been mentioned.

Research Work Should be of Better Quality

All of us are keenly aware of some of our weaknesses. We know that the focus should be sharpened — as has been mentioned already. Many times we would prefer to work on more significant problems rather than those which demand our attention. In our so-called "service research," we know how often our results are too slow. We need better methods of sampling and better questionnaires. We need to standardize many of the basic units with which we deal: for example, the "school district," the term "enrollment," and even the "school." Can you tell me, what is a school? If a certain school building houses pupils in grades Kindergarten through Grade IX and the same principal is in charge of the entire group, is it one school? or two? or three? Unless we can define and standardize such simple terms, have we any way to count or measure? Yes, clear definition of terms and the establishment of standard units is a prerequisite to the greater accuracy in educational research, which we know we must somehow achieve. Otherwise, we will continue to meet such criticism as Mark Twain is alleged to have leveled at one group of scientists: "Get your facts first, and then you can distort them as much as you like."

Still another need in the area of method, in my judgment, is better use and less abuse of educational statistics. Better and more accurate procedures will undoubtedly be developed, and should be welcomed and used. At the same time, however, it is my considered opinion that intricacy of formulæ and the compounding of computations cannot offset false hypotheses or inaccurate observations. I am not greatly impressed by efforts to proceed mathematically without an adequate foundation of valid facts.

Finally, I suggest the need for increased cooperation and better integration of effort among those of us who work in the field of educational research. If we could know more about what is being done by others, if we could more often plan and work together, the total result might be considerably improved. Conferences, such as the one you are holding in California, represent a step in the desired direction.

Wider Use Should be Made of Research Findings

Much use is being made of research, to be sure, but not nearly enough. In many classrooms the teachers do not know or seem to care what has been demonstrated as best procedure. Yet, as Aldous Huxley tells us, "Facts do not cease to exist merely because they are ignored." What few things we do know with certainty surely should be put to work. Again, this implies further teacher preparation (both preservice and inservice) in which a strong emphasis is laid on using the results of research. Classroom teachers must catch the spirit of Browning's lines —

> As is your sort of mind
> So is your sort of search; you'll find
> What you desire.

There must be better distribution of research findings, many of which now go unnoticed in theses, special memoranda, obscure reports, and articles in magazines of limited circulation. Further effort is needed to circulate research information. Again, the new magazine of educational research, which is being launched by the California Teachers Association, is an encouraging step in the right direction for your State.

Finally, there is need for better interpretation of our results — something for which all of us are responsible. Most of us need less skill in verbal legerdemain; less skill in restating the commonplace; less facility in transforming the obvious into terminology which is absolutely incomprehensible!

Summary

These are my convictions. In them there is nothing unique, but if they are valid, "'Tis better to be right than to be original." Do they check with your experience? Is it true that:

1. Research is in the growing period — its period of infancy and youth?
2. Research is needed on *many* additional problems — we know so little, for sure?
3. We need more and better research workers — both professional and teachers?
4. We need research of higher quality — even our own?
5. Wider use should be made of research findings?

If these things are true, as I believe they are, then we have the biggest job in education. The day of educational research is at the morning; the year is at the springtime. We can attack our jobs with new vigor, knowing full well that "Facts, when combined with ideas, constitute the greatest force in the world." This is our challenge!

Measuring I.Q. Changes of High School Students

J. Merritt Winans
Bakersfield College

Does the intelligence test score of the honor student rise during the high school years and that of the poor student fall meanwhile? To view the problem in another light, does the learning in high school which is measured by teachers' marks transfer to an intelligence test?

Among previous investigators of the relationship of school learning to intelligence test scores, Lorge (1) found that differences in amount of schooling, measured by highest year attained, were positively related to the intelligence scores of adults. An earlier study by Thorndike (2) had shown that variations in pattern of high school courses taken in one year effected unimportant differences in amount of interim improvement in mental test scores. A similar study by Wesman (3) later found results which essentially corroborated those of Thorndike. Wesman concluded that the defect inherent in this experimental approach was the assumption that all who enroll in a course learn equally from it.

The purpose of the present investigation was primarily to test the hypothesis that achievement in high school, measured by teachers' marks, may be related to interim changes in intelligence test scores. A secondary purpose was to study the trends of I.Q. changes in students at this level in relation to sex and curriculum differences.

Eighth grade and twelfth grade scores on the *California Test of Mental Maturity, Short Form,* were gathered for a low twelfth grade class at a California high school. The twelfth grade I.Q.'s resulted from administration of the adult form of the test by the writer in December, 1948. The eighth grade I.Q.'s, which were the result of administration of the intermediate form of the test by members of the staff of the county school office in April, 1945, were found recorded for 169 of the approximately 300 members of the class. It was discovered that the remainder, who were necessarily excluded from major consideration in the study, had arrived in the community some time after the 1945 testing.

Dr. James Merritt Winans is a psychology instructor at Bakersfield College. He previously taught at San Mateo Junior College and at City College of San Francisco. His article is based on his doctoral dissertation which was completed last summer at the University of California, Berkeley.

Trends in I.Q. Changes in the Experimental Group

Mean I.Q.'s for the experimental group were 103.1 in 1945 and 104.0 in 1948. The gain of .9 points was not significant. Standard deviations in 1945 and 1948 were 13.4 and 11.7 respectively, and the correlation of .68 was found between the two sets of I.Q.'s.

The rise in mean M.A. during the 44-month period was 29.6 months. This gain was not unexpected, since the mean chronological age of the group at the end of the period was about 15 months beyond the ceiling age of 16-0 years, which is established as the time of cessation of mental growth measured by this test.

Mean I.Q. changes which were not considered significant were: college preparatory girls ($N = 29$) gained 1.2 points; college preparatory boys ($N = 20$) lost .8 points; commercial girls ($N = 22$) gained 2.8 points. (No boys were classified as commercial.)

The mean I.Q. of general curriculum girls ($N = 57$) dropped 3.1 points, a loss which was significant at the .02 level. General curriculum boys ($N = 41$) made a gain in mean I.Q. of 4.5 points, which, although statistically significant at the .01 level, was not considered genuine for a reason to be explained later.

The mean M.A. gain of general curriculum girls, which was 23.0 months, was significantly less than that of the other four subgroups, whose mean gains ranged from 31.3 to 33.6 months. Thus the amounts of M.A. gain corroborated the I.Q. loss of general curriculum girls, but did not corroborate the I.Q. gain of general curriculum boys. The appearance of this latter spurious gain was judged to be due to the operation of the ceiling age of the test in combination with the fact that these boys were significantly older than the members of the other four subgroups.

When it appeared that some of the 1948 I.Q.'s might be deceptive, inasmuch as they were based on chronological ages variously in excess of the ceiling age, greater emphasis in the remainder of the study was placed on mental age. The M.A. is directly proportional to the raw score on the intelligence test.

Individual changes in I.Q. fell into a fairly normal distribution and ranged from a gain of twenty-seven points to a loss of twenty-four points. The mean *amount* of I.Q. change, irrespective of whether gain or loss, was 8.2 points and the standard deviation was 6.5 points.

When a composite of the 1945 and 1948 I.Q.'s was taken as an indication of level of intelligence, this factor was found not to be significantly correlated with *amount* of I.Q. change (regardless of sign) or with M.A. gain. A similar result was found when the total score on the *Iowa Tests of Educational Development* was used in lieu of a measure of general intelligence. Thus it was found that the bright student was no more likely

than was his dull classmate to improve in score on the *California Test of Mental Maturity* or simply to fluctuate in I.Q. during the period under investigation.

Teachers' Marks and Mental Test Score Changes

Teachers' marks for all subjects, except for physical education and military training, were quantified and tabulated in the following categories for the first six semesters (low 9 through high 11): all subjects, academic subjects, nonacademic subjects, English, mathematics, and science. Teachers' marks for low twelfth grade subjects were placed in a separate category.

To test the major hypothesis, that changes in mental test score are related to achievement as measured by teachers' marks, I.Q. gain and M.A. gain were each correlated with the various categories of marks. The resulting coefficients, mostly positive, were of the order of .1 and were not statistically significant.

As a check on this finding, two groups of twenty-six students each were selected by virtue of their ranking highest and lowest in teachers' marks in all subjects for the first six semesters. It was found that the high group did not differ significantly from the low group in I.Q. gain or M.A. gain. As a further check, small groups selected from the extremes of the distribution of M.A. gain were found not to differ significantly in average of teachers' marks in all subjects for each of the first six semesters. Thus it was concluded that, under the circumstances of this investigation, changes in mental test score (both I.Q. and M.A.) during the high school years are not related to achievement as measured by teachers' marks.

Amount of M.A. gain was found to be unrelated to the three reading scores, the vocabulary score, and the total score on the Iowa battery, which was administered in the high tenth semester. Gain in M.A. was also found to be unrelated to scores on the *Carter Study Methods Inventory*, a self-report instrument of seventy-five items.

The 1948 Non-Language and Language sub-I.Q.'s were found, by correlational method, to be equally related to the M.A. gains. (Sub-I.Q.'s were not available in the 1945 data.)

Boys, whose mean Non-Language I.Q. in 1948 was 115.6, were significantly superior in this respect to girls, whose mean was 107.6, and were less variable than girls. No other significant sex differences were found.

Of the six subtests in the *California Test of Mental Maturity*, the first (discriminating between left and right) was apparently of little value for this group, since all students made a high, if not perfect, score on it. On the other hand, the sixth subtest (vocabulary) appeared to be of much greater length and difficulty than was needed for discrimination in this group.

An incidental finding of interest in the 1948 I.Q. data is that the members of the senior class who arrived in the community after the 1945 testing were found to be superior to their classmates. The mean I.Q. of the 116 "late arrivals" who were measured in 1948 was 107.8, with a standard deviation of 14.1. This mean exceeded by 3.8 points the mean of the experimental group which, it will be recalled, was 104.0. The difference, which is significant at the .02 level, was found mainly in the upper quartile and was more marked among boys than girls.

Conclusion

In summary, the principal conclusion of the study is that, although appreciable changes in I.Q. may occur during the high school years, these changes may not be related to the differences in interim achievement which are indicated by teachers' marks. It is possible that this negative finding may be due to a dilution of teachers' marks by factors other than achievement, or to a characteristic of the intelligence test used, such as the fact that fifty per cent of its content is non-language.

Regarding the I.Q. changes, which amounted to as much as twenty-seven points and averaged eight points, it must be kept in mind that the genuineness of these data is dependent upon the high reliability coefficient of .93 cited in the manual for the forms of the *California Test of Mental Maturity* used in this study.

So far as the influence of differentials of scholarship is concerned, this study indicates that the I.Q. is stable and resistant to change. I.Q. change, however, did appear. The reasons for such change might well be the subject of further investigation. In particular, the investigation might seek the reason for the significant drop in I.Q. noted for girls in the general curriculum, a drop which could possibly be due to inadequacies of the content of that curriculum or to poor motivation of students enrolled in it. The problem merits further study.

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Criteria For Determining the Adequacy of School Districts in California

C. C. CARPENTER
Los Angeles County Schools

DURING the last twenty years, while the population of the State has greatly increased and concentrated in certain areas, there have been only minor changes in school district organization in California. School districts originally were intended to serve a specific community, but this purpose has been outgrown in many years.

Furthermore, the purposes and objectives of education have expanded. The educational services required to equip children to live in the modern world have increased greatly. It is imperative that school district structure be organized best to supply these needs.

Recent legislation reflects an interest on the part of the State in urging that school districts be organized in such a manner as to provide the best educational opportunities for the money expended. The California Legislature passed the Optional Reorganization Act in 1945 requiring that all districts in the State be studied. This Act was amended in 1949 in an effort to make it more functional and more democratic.

It is important that criteria be developed to determine the characteristics of an adequate school district. The author has attempted in the present study to answer the following questions:

1. What are the educational services that should be provided by a school district?
2. What financial structure is necessary to provide adequate educational services?
3. How large need a school district be?
4. What social and economic factors are involved?

Basic Assumptions

In developing a set of criteria for use in determining the reorganization of school districts, the following basic assumptions have been made for the purpose of this study:

1. The state, with the reasonable participation of the school district, is responsible for an adequate educational program for all persons who can benefit.

Dr. Charles C. Carpenter, assistant superintendent of the Los Angeles County schools, has spent the past 25 years in teaching and administrative work in California. In addition to his present position, which he has held for seven years, Dr. Carpenter also serves as lecturer in education at the University of Southern California. His article is based upon his dissertation which was completed in 1948 at the University of Southern California.

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2. The school district has been created by the state, and by the same token may be altered completely or abolished by the state.
3. The local shcool district has been given the responsibility of operating its schools and is autonomous in those functions granted to it by statute.
4. The concept of different levels of education is giving way to the concept of a continuing educational experience of the child from the kindergarten through the high school or junior college.
5. The type of school district that can best meet the needs of a child is the unified school district.

What are the Educational Services that Should be Provided?

It is recognized that the educational services listed here do not include all of those that may be desirable or adequate for every school district; however, the services considered probably furnish a large enough sampling to indicate satisfactory criteria. School districts at the present time vary greatly in size in California from the more than 900 one-teacher schools to large metropolitan areas. Considering the State as a whole and using as a reference the literature in the field, it would seem that for practical purposes a minimum administrative unit of 1,000 pupils is desirable. Such a school district should employ approximately 40 teachers, requiring one superintendent in charge of the educational program and an assistant superintendent in charge of business, finance, and special services.[1]

From the literature in the field based upon accepted practice and adapted to California conditions, it would seem safe to assume that there should be one supervisor to approximately 35 teachers. This does not necessarily imply the central office type of supervision. For furnishing adequate instruction at the various levels, a ratio of 25 pupils per teacher is recommended for California. The attendance unit should be large enough so that no teacher should be required to teach more than one grade.

The literature in the field in regard to pupil-teacher ratios in the special fields is limited, yet all authorities are agreed that these services are an essential part of the school curriculum. The following ratios seem justified:[2]

1. One nurse for every 1,000 pupils.
2. One physician for every 3,000 to 4,000 pupils.
3. One attendance officer and clerk for every 2,500 pupils.
4. A library at every school.
5. Food service should be available to every child.

[1] These standards may be compared with those of national studies (1:79-88).

[2] These California recommendations may be compared with those of the National Education Association (2:17-18, 21).

6. Adequate provisions for the extension of the educational program not only for adult education and kindergarten, but also for the brilliant, the physically handicapped, and the mentally retarded.
7. One psychologist for every 1,000 to 1,500 pupils in the elementary school and one for every 500 to 600 pupils in the secondary school.

What Financial Structure is Necessary to Provide Adequate Educational Services?

The cost of providing complete educational services for selected city and unified districts was studied. The most valid criterion found for ability to support this cost was the assessed valuation per pupil in average daily attendance in both the elementary and high school levels, because both local tax support and equalized state aid are affected thereby. On this basis the assessed valuation per pupil for the five selected high school districts varied between $10,353.13 and $58,527.01.

For seven selected elementary school districts the variation was between $5,772.46 and $24,231.52. From this local factor alone it seemed that only some of the elementary school districts would be able to provide complete educational services when unified, but when the State equalized apportionments were considered, it seemed likely that these districts could provide adequate services.

The two union high school districts showed the same result. State equalized aid made the assessed valuation per pupil much less important where current expense items were concerned.

When capital outlay was considered, the assessed valuation per pupil assumed a much greater significance. The assessed valuation of the district limits its bonding capacity. Districts having many children and a low assessed valuation cannot properly house their pupils.

If one or more elementary school districts wish to withdraw from a union high school district and form a unified school district, the following questions should be answered:

1. Is the assessed valuation of the area withdrawing sufficient to amortize the present outstanding bonded indebtedness of the area, and also to construct the necessary new secondary school plant? (As of 1948 this would require approximately $50,000,000 of assessed valuation, unless school buildings are already located in the area that can be used for high school purposes.)
2. Is the original district adequate in all respects after withdrawal of one or more districts?

The greatest obstacle to unification of elementary districts in Los Angeles County would be the financing of a new high school plant. If the present type of high school organization and present building costs are assumed, it would require $1,500,000 to build and equip a high school for 1,000 pupils. To raise this amount in bonds would require an assessed

valuation of $30,000,000. In addition to this, most high school districts already have a considerable amount of bonds outstanding for which the new unified district must continue to be responsible. This would require an assessed valuation considerably in excess of $30,000,000. Of the seven districts studied in Los Angeles County, only two had more than $30,000,000 assessed valuation, and both had high schools within their district boundaries.

Elementary districts are, therefore, limited by their assessed valuation in forming unified districts, provided there are not suitable buildings within their boundaries that may be used for high school purposes.

The effect of using present high school districts in Los Angeles County as a basis for forming unified districts was studied. In every union high school district in the county the effect on the component districts would be to equalize the assessed valuation per pupil. However, there was a wide range in assessed valuation of the proposed unified districts, varying from $5,309 to $26,433 per elementary pupil. The component elementary districts, however, varied from $2,162 to $66,862 per elementary pupil.

How Large Need a School District Be?

The most efficient unified district should have an attendance of 10,000 children. In California such an enrollment is not always possible and a more conservative enrollment of 1,500 has been given as a minimum by several authorities in the field. Educational services in districts of this size must be supplemented by the services of the office of the county superintendent of schools or by cooperation of several districts.

Generally, school districts that employ fewer than fifty teachers do not provide the adequate minimum expenditure for general control. For attendance areas there should be a minimum of six teachers for a six-grade school with 150 pupils, and eight teachers for an eight-grade school with a minimum of 200 pupils.[3] A junior high school or high school attendance area should serve not less than 250 pupils with ten teachers. However, if adequate services are to be provided the high school should be considerably larger.

In rural areas the size of the attendance area may be determined by the distance pupils may be reasonably transported. Under good conditions transportation routes may be as long as thirty-five miles. Maximum one-way trips may be defined for practical purposes as fifty to sixty minutes for high school pupils and twenty-five to thirty-five minutes for younger children.

Unification has been opposed by some wealthy elementary districts on the basis that it would increase their taxes and decrease the educational

[3] Compare with related studies (1:79-82).

services that are now being provided. California, however, is wealthy enough to provide an adequate education for all of its children. If, after the best type of school district organization is established, more State support is needed, it could be provided by proper legislation.

Social and Economic Factors Considered

The importance of organizing schools in relation to the community that they serve has been greatly emphasized by current authorities.[4] The following criteria are recommended:

1. School attendance units should be coterminous with the community boundaries.
2. School administrative units should form larger community patterns.
3. Several attendance areas may constitute an administrative unit.
4. Attendance units and administrative units should not necessarily conform to political units.
5. The administrative unit should be as flexible as possible.
6. The attendance unit should be thoroughly democratic.
7. The administrative unit should best fit the interests, the economy, and the culture of the area.
8. Provision should be made so far as possible for local participation, initiative, and control by the people of the district.

Conclusions

The unified school district should provide all educational services recognized by educational authorities. It will provide experiences and give direction to the learner, leading him to the accomplishment of the desirable objectives of self-realization, human relationships, economic efficiency, and civic responsibility. The providing of these services requires qualified personnel, proper organization, and adequate leadership. The adequate school district should provide independently, as far as possible, the following: administration, both educational and financial; health; cafeteria; guidance; audio-visual; library; child welfare and attendance; and extension of the educational program upward and downward to meet the educational needs of all of the people in the school district. The school district should be able to provide these services completely; however, it is recognized that some districts will not be able to provide complete educational services and will need supplementary services from the office of the county superintendent of schools, or will need to cooperate with other school districts in pooling their educational services.

Some other method must be found for providing funds for capital outlay. By forming larger unified school districts, a more financially equalized educational program could be provided for all the children in the State, and funds for school buildings. The question of providing capital outlay

[4] See Bibliography (1:69-74).

on an equalized basis and putting some plan into effect is necessary.[5] The planning, locating, and financing of school buildings would be considerably simplified by unification. School transportation could be more efficiently and economically planned.

There is some reason to believe that districts can be too large. The present pattern of school districts, especially the high school district and the large elementary district, is not necessarily an adequate unit of administration. Areas, especially established districts, need to be examined carefully to determine whether they would qualify as the best possible basis for forming a unified district. It is imperative that administrative units and attendance units not be confused. An attendance unit should conform to the natural sociological boundaries of the community, but not to political subdivision lines. It should be large enough to provide adequate educational services for that segment of the school program which it serves. An administrative unit may and in most instances would be composed of several attendance units, and should be based upon larger sociological areas in so far as possible.

A unified school district can be too large. It seems that when an area has two or more complete sociological units and these areas are independently able to provide adequate educational services, they would be justified in forming independent school districts in order to provide for greater local participation, initiative, and control.[6]

[5] Recent legislation empowered by passage of Proposition No. 1, November 8, 1949, is the first step toward this objective.

[6] See Bibliography (3:41-44).

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This country faces a tragic paradox. Although teaching is the most important profession in a democracy, the education of teachers is the poorest of all professional departments. Millions of dollars have gone to medical schools and to colleges and institutions of science and technology. During the war, atomic research alone consumed billions. Yet, amid unparalleled generosity to other professions, almost no one has thought it worth-while to endow schools of education. (Excerpt from an article by Benjamin Fine, *New York Times*, Sunday, October 30, 1949, quoting from a speech by Dr. Edwin R. Embree, of the Greenwood Foundation.)

Study of Terminal Vocational Students[1]

STANLEY L. COMBS
University of Redlands

THAT the terminal vocational student presents a critical problem is generally agreed by junior college educators and administrators. Since the three colleges, some of whose students were chosen for an analysis in this investigation, show a diversity in locale, organization, and program, it is felt that these students present a good cross-section of California terminal vocational junior college students in general. The statistical analysis of these young men and women and its interpretation in terms of their needs in general education should serve as an aid in solving a part of the critical problem of the terminal vocational student in junior college. With this in mind, a proposed curriculum in general education for such students is suggested.

Proposed Curriculum in General Education

Basic concepts of general education have been described by many educators and investigations. Some list as few as two major areas, *i.e.*, the need of the individual as he develops, and those of the individual in his relation to a democratic society. The needs of students as described in different concepts of general education areas seem to be comparable; however, the names assigned to them may vary.

General education for the mass of youth at this level must demonstrate a functional relationship to the common needs of man. Such needs usually include those which pertain to health of the individual and society; to rearing and educating the young; to governing the population in accordance with democratic principles; to satisfying aesthetic and spiritual needs and providing recreation; to using, developing, and conserving natural resources; and to finding a job and making a living.

[1] This is the second half of Dr. Combs' article which appeared in the January issue. The first installment presented an analysis of the terminal vocational student, while the present installment describes a proposed curriculum in general education to meet the needs of such students.

Dr. Stanley L. Combs holds the rank of associate professor of education at the University of Redlands where he has taught for the past two years. He took his undergraduate work at the University of Colorado, and graduate work at the following istitutions: University of Southern California, Oxford University, University of Washington, and the University of California at Los Angeles. Dr. Combs' article is based upon his doctoral dissertation which was recently completed at the University of California at Los Angeles.

With these needs in mind, basic areas of general education are here called:

Personal Development (Relation to Self)
Human Relationships (Relation to Others)
Socio-Civic Responsibilities (Relation as a Citizen in a Democratic Society)
Vocational Life (Relation to the World of Work)

If the junior college is to train its students in all of the above basic areas of general education, it should first of all develop its guidance program. One function of an adequate program of guidance is to lead the students into each area of general education so that no student remains as one-sided as this investigation reveals. This problem may be solved in two ways: (1) solely by required general education courses within the junior college curriculum, or (2) by a combination of a required core with a more indirect and subtle approach of giving students training in general education in such a way that they are almost unaware of the deviation from the direct road to their vocational aims.

To illustrate this "indirect" approach, as well as a required core, the following curriculum in the four basic areas of general education is suggested for this group of students.

AREA OF PERSONAL DEVELOPMENT

I. REQUIRED CORE

A. *Course in Individual Psychology*

In this course the student discovers his strength, his weaknesses, his limitations. He is given self-assurance, and his personal interests are defined and developed. From the tests he is given, he learns to evaluate the results in terms of his own capacities. There is also training in mental hygiene so that the student can recognize some of the causes of emotional maladjustments and their remedies.

B. *Course in Communication Skills*

The student receives opportunity to develop facility in the use of the mother tongue. Since he lacks verbal skills, he is encouraged to read for fun. He practices selective seeing and hearing to aid him in judging what is important and should be retained from experiences coming to him through these two senses. He is encouraged to use language as a means of human communication: in mock job interviews and sales conferences, in conversations with co-workers, the boss, and business contacts, and with his family and friends. He learns to write simple personal and business letters, forms, letters of inquiry about jobs, etc.

C. *Course in Physical Health and Recreation*

First he is given an understanding of his own body and how to maintain its efficiency. Rather than the traditional scientific study of human physiology, the student learns of the general functions of the body, including reproduction. In addition, he learns the importance of cleanliness, adequate diet, and rest, effects of poisons, excessive use of stimulants, and caution in the use of drugs, medicines, and panaceas. Training in first aid is also given and some knowledge of psychosomatic medicine, *i.e.*, how

emotional disturbances can affect physical health. Integrated with all of this, an emphasis is placed on sports which these young men and women may pursue in adult living: golf, tennis, badminton, bowling, and archery.

II. THE "INDIRECT" APPROACH THROUGH VOCATIONAL COURSES

Here the student is shown the relation of the specific vocation to himself and to his world. Strong emphasis is given the fact that mechanical and industrial skills, business and agricultural techniques cannot be divorced entirely from intellectual and emotional skills. Exhibits of plastic and graphic arts placed in the vocational classrooms help to produce aesthetic appreciation.

Character training is accomplished in a large part through vocational training. Since the occupational aim of the terminal vocational student is, on the whole, specific, here is the place to inculcate the traits of heart and mind which constitute the basis of good living and good working. In this instance, the eraining for integrity and development of moral and spiritual values, the role of the teacher is perhaps more important than it is in any other field of learning. He sets the example of the well-integrated, poised, adjusted, socially-conscious, right-minded individual. The teacher must not lose sight of the fact of the continuing interrelationship between the vocational field and the areas of general edccation.

AREA OF HUMAN RELATIONSHIPS

I. REQUIRED CORE

Course in Marriage and the Family and Other Human Relationships

In this course, beginning with the student as he is today, an understanding is given of immediate relationships within his own family. He receives preparation for his role in marriage. He learns of effective participation in a democratic family. He becomes aware of problems he may encounter when he marries and establishes a home. Such problems may include budgeting, banking, buying, parenthood, in-laws, possible pressures and conflicts in marriage. The physiological functions of marriage, including reproduction, are interrelated with the course in physical health.

II. THE "INDIRECT" APPROACH THROUGH VOCATIONAL COURSES

Perhaps most of the development of a student's understanding of other human beings comes in ways other than through required courses. Relationships with employers and with fellow-workers is envisioned within the vocational area. The understanding of one's fellow classmates and relationships with them is a continuing process, nurtured by all teachers and leaders and especially so in the human interplay of students learning about jobs.

AREA OF SOCIO-CIVIC RESPONSIBILITIES

I. REQUIRED CORE

Course in Socio-Civic Rights and Duties

Relations in this course are those of a citizen in a democratic society. They are institutional as opposed to face-to-face contacts. The student is made aware of such institutions as school, church, community, state, nation, world. He is given an understanding of his socio-civic responsibilities which may include social problems of housing, crime prevention, labor and management, disease, etc., and civic problems involving local, state, and national governments. He recognizes problems of today's world

as they affect him. He is imbued with his own worth as a citizen of a democracy so that he wants to participate in governmental affairs. He understands how he shares the responsibilities and privileges of a democratic society so that his future cooperation may prove not only good for society in general but of great satisfaction to him personally. To serve these students well, this course begins with their present problems, with what they know, working back in time (to the past related to now) and out into space (from the community to the state, nation, and world).

II. THE "INDIRECT" APPROACH THROUGH VOCATIONAL COURSES

The awareness of socio-civic rights and duties is developed as part of vocational training. The problems of tolerance and the understanding of minority groups, for example, may well be handled in any class in which a student of a minority group (race, color, or religion) is enrolled. Here the attitude of the teacher is again of particular importance in guiding student attitudes. Socio-civic responsibilities of vocational areas are emphasized.

AREA OF VOCATIONAL LIFE

I. REQUIRED CORE

In addition to specific training for effective service in a chosen vocation, requirements here include occupational orientation (*e.g.*, the fields in which there is present demand, qualifications necessary, etc.) and economic information (*e.g.*, salary levels). It also encompasses an understanding of technological advances and how the worker must adapt himself to them. He learns of any problems his job may create in his personal life (*e.g.*, night work).

II. THE "INDIRECT" APPROACH

Since the terminal vocational student, as shown by data gathered for this study, seems to feel that required courses other than those in his occupational field are unnecessary and time-consuming, one of the best means of gaining his interest in general education is by relating problems of vocational life to each area. In a course in individual psychology, he takes vocational aptitude and interest tests. These give him an opportunity for self-analysis in relation to his chosen occupation. The course in physical health may include information about industrial accidents and diseases and group health insurance. Within the required course in socio-civic rights and duties, the student learns something of labor-management relations, the purpose and functions of labor unions, labor legislation, etc. The use of vocational information within the areas of personal development, human relationships, and socio-civic responsibilities can be the most dynamic means of motivating the interest of terminal vocational junior college students in the whole general education program.

Implications for General Education

These students are specific in their aims — occupational and educational; they know what they want. Neither dabblers nor drifters in education, they are serious in pursuit of training which will gain them early and effective entrance into their chosen work. They should be given a uni-

fied program to further these aims. They do not appear to be much interested in learning of "cultural" subjects or to have the scholastic abilities to profit much by such studies. General education for these students needs to be dynamic and specific, planned in terms of its significance to the individual, and should lead him from the particular into broader educational fields.

The definite occupational aims of these students may be in part a result of their socio-economic backgrounds, and they seem to be in a hurry to go to work. In many cases they are already working at employment related to their chosen aims.

In planning this program of general education, therefore, the element of time must be taken into consideration. To this group of young men and women, time is an all-important factor, since they are under pressures from many directions. These pressures may come as advice from business and industry to take many specific courses in preparation for technical adequacy. Other pressures, imposed for similar reasons, may come from junior college vocational instructors, who are likely to feel that their students need to take many courses in addition to the required minimum in their major fields. A third group of pressures may come from within the students themselves. These young men and women seem to have inner anxieties which impel them to hurry along with their educational preparation so that they may more quickly go to work. Some of these anxieties may result from financial worries. Others apparently come from emotional conflicts at home and the desire for independence. In any case, terminal vocational students are likely to avoid courses which appear to have no direct bearing on the attainment of their occupational goals.

These men and women tend to show better than average manual or mechanical abilities, but only moderate to low verbal ability. These facts are supported both by a study of their hobbies — manual and athletic — and by an analysis of high school grades and achievement and psychological test scores. All of the latter fall in low deciles of national norms and indicate a need for a special curriculum for terminal vocational junior college students.

The importance of a vital general education for this group of students is especially intensified by the era in which they live. Unstable social and economic conditions and chaotic world affairs tend to put pressures on human beings. Only through an understanding of the problems to be faced may these pressures be released.

The planning of such a curriculum in general education—a curriculum designed to fill the needs of terminal vocational students and attempting to give them preparation for well-balanced adult living—can be a dynamic challenge to a junior college.

Parents Forecast Enrollments

GEORGIA SACHS ADAMS
Pasadena City Schools

WHEN school opened in September, 1949, parents of the Jackson School, Pasadena, found that all of their first and second grade pupils and a large percentage of their third grade pupils had to attend half-day sessions. Instead of expending their energy in discussions and petitions, the group decided to carry on a survey to determine the number of children of preschool age in their district and the number of children now attending private schools who would probably return to public schools if half-day sessions were discontinued.

The survey was undertaken to accomplish two purposes: (1) provide clear-cut data concerning anticipated building needs so that plans could be projected to handle the peak load of pupils, and (2) provide data as a basis for setting the district boundaries for the proposed new elementary school in the adjoining area.

A committee was appointed which included four couples from the Parent-Teacher group. The president of the Association and the principal and secretary of the school were ex-officio members. Members of this committee pooled their thinking concerning the questions they would like to ask and drafted a letter to parents requesting their help as surveyors. The response was excellent. Approximately one hundred parents volunteered to call at each home on the four sides of a single block and thus do their share in solving a problem which was of concern to all of them.

At this point in their deliberations, the committee felt the need of professional assistance in refining their survey form, in planning their instruction session for cooperating parent surveyors, and in the summarization of the data. With the permission of the superintendent, the school research coordinator accepted this responsibility.

The committee decided to use a 4″ x 6″ card to record the data for each child. Data regarding a vacant lot, a house under construction, or a vacant house were recorded on a card; similarly, a minimum of data concerning a home in which there were no children were recorded on a card. For a home in which there was more than one child, data for the first child

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For the past nine years, Dr. Georgia Sachs Adams has served as research coordinator of the Pasadena City Schools. Her professional experience includes summer school teaching at the University of Southern California, University of California at Los Angeles, and Claremont College. She is co-author (with Dr. John A. Sexson) of "Progressive Tests in Social and Related Services." Dr. Adams is a member of the editorial board of the California Journal of Educational Research.

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were recorded on a card which also included data concerning the home (owned or rented, trailer, etc.); data for other children in the family were recorded on subsequent cards for the same address.

The form, as finally approved, included questions regarding home ownership, date on which the family had moved to the Pasadena City School District, date on which the family had moved to their present address; name, age, and birth date of each child; and information concerning school attended by children of school age. For children of elementary school age attending private or parochial schools, the surveyor was instructed to ask: "Where will he (or she) go to school next fall?"

The committee members decided that since they were taking the time to visit each home, they might just as well obtain information concerning children of school age as well as those of the pre-school years. A parent-teacher association which was less well motivated, however, might do well to limit their inquiry to children of pre-school age — information which is most significant for school planning.

When the form was agreed upon, approximately 100 mimeographed cards were prepared and were used by committee members in a try-out experience: (1) to see if they desired to revise the form in any way, (2) to help them prepare written instructions for surveyors, and (3) to increase the effectiveness with which they could handle their instruction meeting with parents. After this try-out experience, the form was printed in the college print shop, and a sheet of instructions was developed.

The school secretary was released for one and a half days, provided with an enlarged map of the school district, and given the responsibility for assigning areas to parents. In so far as possible, a parent was assigned to his own block; otherwise, to one close to his place of residence. An attempt was made to equalize the load as nearly as possible, dividing some blocks in which there were multiple-family dwelling units and making other adjustments. The city directory was of great value in attempting to equalize the loads of surveyors.

In order to make the data as useful as possible, the Jackson district was divided into seven enumeration areas or zones. These zones were defined by the Research Coordinator on the basis of natural boundaries, transportation barriers, and hypotheses concerning possible adjustments in district boundaries as a result of the building of the proposed school. These zones were outlined by the clerk on her enlarged map of the school district. The names of volunteer enumerators were arranged in alphabetical order on a master list and were assigned numbers serially. The clerk, as she made her assignments of blocks, recorded on each block the number of the surveyor or surveyors assuming responsibility for that block. She also prepared for each surveyor the following two aids for their work:

1. A 4″ x 6″ card which contained the following information:

   Name, address, and telephone number of the surveyor
   The official number assigned to the surveyor which he was to record on all his cards
   The zone in which he was working, which was to be copied on all his cards
   A rough drawing of the area he was to cover (to avoid misunderstanding and possible duplicatoin of effort)

2. A long strip of heavy ruled paper, approximately three by eighteen inches, headed with the name and number of the surveyor and the letter of the zone in which he was working. On these strips, the surveyor was to record serially the number of each house in his block with such notations as vacant house, house under construction, etc., or if an occupied dwelling, with the number of children living at the address. This strip was used by the surveyor to keep a record of his own work, homes to which return calls had to be made, and the like.

Both of these aids were of service in checking and summarizing the data, as well as in its collection.

The instruction meeting was handled entirely by the parent committee. The Research Coordinator was in the audience, but found it unnecessary to supplement the work of parent leaders. During this meeting, it was stressed that the role of the surveyor was to obtain data for one specific purpose — to help in the planning of the building program. The information obtained was confidential; violations of residence restrictions (such as use of guest houses) or even of the compulsory education laws were not to be reported. Persons furnishing information were told that data supplied were to be used solely for research purposes.

With the sheet of instructions, each surveyor was given a form which he was to fill out and return with his cards. This form was designed chiefly to remind the surveyor of the detailed instructions he was to follow. This check-in form read as follows:

A check in front of each number or letter indicates completion of task.

1. Arranged the cards in order
   - ☐ a. By streets
   - ☐ b. By numbers on each street

☐ 2. Turned in a card for each vacant lot
☐ 3. Turned in a card for each vacant house
☐ 4. Turned in a card for each house without a child
☐ 5. Turned in a card for each child
☐ 6. Turned in the Master Card
☐ 7. Recorded on each card the number of children in the family

Signature: _____
Address _____ Tel. No. _____
Date _____

All parents had been informed of the purposes of the survey through the initial letter from the Parent-Teacher Association and the principal, in which their cooperation had been solicited. It was most important, however, that other residents of the district be informed of the purposes of the survey. For this reason, publicity was given to the survey in both local newspapers. In one of the papers, an attractive picture was used in which the co-chairmen of the committee were seen interviewing a family of father, mother, and three appealing pre-school-age children. Such publicity helped to dignify the project and insure the surveyor of a welcome to the home. In only one instance did a parent refuse to give information to the surveyor.

In the compilation of the results, clerical assistance was provided by the central office. A considerable proportion of the time required for the summary was spent in checking to make sure that all returns were in, that there was no duplication, and that the cards were properly filled out and labeled by zone. In a comparatively few instances, surveyors had failed to call back when there was no one home; in these instances, a form letter and additional cards had to be mailed to the address. This procedure had to be used also in the case of a few pre-school-age or private-school children for whom birth dates were not supplied. On the whole, the returns were excellent.

On the basis of this survey, the following types of summaries were easily compiled:

1. The number of children by age groups in each of the enumeration areas or zones.
2. The number of vacant lots, houses under construction, and vacant homes in each zone.
3. Data regarding home ownership, length of time families had lived at present address, and length of time families had lived in Pasadena (by zones).
4. Average number of children per occupied home (by zones).

These data are of considerable value in picturing immediate and future school housing needs in the area studied. The technique used and the project should be of interest to parent-teacher groups in other communities.

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"Educational administration has developed as a result of research, and only in so far as research provides the framework for the school program as it emerges, takes shape, and progresses will that program continue its pattern of advancement." Excerpt from Dr. Herold C. Hunt's address to the 1949 annual meeting of the American Council on Education. (*The Educational Record*, 30:328, July, 1949.)

Vitalizing the Third-Grade Social Studies Program

HAROLD SPEARS
San Francisco Public Schools

FILM strips, plastic-coverel study prints, sound transcriptions, and highly illustrated booklets, all pitched to third-grade ability, are among the integrated classroom materials that have been developed in San Francisco to vitalize the third-grade social studies program.

This curriculum program has been highly satisfying to everyone connected with the work. It is curriculum development that has gone beyond the course-of-study stage over into the area of classroom materials.

San Francisco's Social Studies Sequence

The sequence of the social studies course in the 86 San Francisco elementary schools is not unusual, but is highly satisfying to most of the teachers. It is as follows:

Kindergarten:	Home and School
First Grade:	Home and School
Second Grade:	Home, School and Neighborhood
Third Grade:	San Francisco and Bay Area
Fourth Grade:	California
Fifth Grade:	United States
Sixth Grade:	The World Today

Naturally, books for the kindergarten, first, and second grades are easily obtainable from educational publishers. Home, neighborhood, and school — *the known* — are standard subject matter found in the books of all companies. Likewise, there is no real problem with respect to either books or visual aids in the fourth grade. There is a good state-adopted social studies textbook on California; the book is supplied by the State.

(The author included the names of many participating teachers and laymen. In following editorial policy, the names were deleted from the article. — *Editor.*)

For the past two years, Dr. Harold Spears has served as assistant superintendent in charge of elementary schools, of the San Francisco Unified Schools. Before assuming his present position, he had been curriculum director in San Francisco. He formerly taught in the public schools of Indiana, Illinois, and New Jersey. He has had teaching experience at all school levels from elementary through teachers colleges and graduate schools. Dr. Spears has published several books and many professional articles. His most recent publications are: "Some Principles of Teaching" (Prentice-Hall, 1949), and "The High School for Today" (American Book Company, 1950). Dr. Spears received his doctorate in 1939 at Columbia University.

The third grade has been the orphan. Only the more ingenious teachers have had a teaching kit dealing with San Francisco, and it was usually made up of pamphlets, maps, and similar materials developed by the Chamber of Commerce and business houses for adult consumption. *Watering down adult literature has never proved to be educationally nourishing for young children.*

Years ago a group of teachers wrote a book about San Francisco, but it has long since gone out of print. It had never been supplied in sufficient quantity, and was reputedly written at a higher level than the third grade.

Materials Used

The materials in this integrated third-grade project include:

1. Six booklets, 32-page, 9 by 10 inches, liberally illustrated, printed in large type and written on the third-grade level. The titles of the books are:

San Francisco Today (General Orientation)
In and Out of San Francisco (Transportation)
Fun in San Francisco (Recreation)
At Home in San Francisco (Neighborhood Communities)
Early San Francisco (History)
Work in San Francisco (Occupations)

2. Eight film strips, 12 photographs to a film, with captions also written at third-grade level. The titles of the film strips are:

The Port of San Francisco
Neighborhoods of San Francisco
An Automobile Tour of San Francisco
Cities and Towns Around San Francisco Bay
Going to Work in San Francisco
Workers in San Francisco
The San Francisco Civic Center

3. A sound transcription which brings to the classroom the typical sounds heard in San Francisco, such as the cable cars, the central engine room of the cable cars, airplanes, traffic, the bells of Mission Dolores, ship bells and whistles, fog horns, the surf, seals, animals at the zoo, trucks, buses, passenger cars, the clang of the traffic signals, the "one-lunger" fishing boats, and trains. The public schools' radio station has its own sound truck for developing transcriptions.

4. A set of 35 photostatic prints, 8 by 10 inches, of early and present-day San Francisco, plastic covered, for classroom use.

5. A study-guide for teachers explaining the use of the student materials described in the previous four points.

6. For teachers, a set of miscellaneous materials to provide additional background information collected from governmental agencies and private firms.

Production Schedule

In an inservice training venture, it is not difficult to get a group of teachers to put in extra hours if they feel that their classes will benefit as a result. In this project not-too-distant dead lines were set for the material on the assumption that teacher committee members deserve and can receive early returns from their investment in time and energy.

The idea of this project, and the early planning, emerged as late as March, 1948. The following production schedule was followed:

1. The first booklet, *San Francisco Today*, appeared September 1, 1948, and each child was given a copy. The first printing was 9,000 copies, and the second run of 10,000 soon followed.
2. One set of plastic-covered study prints was delivered to each of the 86 elementary schools in early October, 1948.
3. The second booklet, *In and Out of San Francisco*, was completed December 1, 1948. The run on this was 19,000 copies.
4. On December 1, 1948, four of the eight film strips were delivered to each school, two being correlated with each of the first two booklets. Although all eight strips were developed at the same time, four were held in the Central Office until some of the later books were printed.
5. The sounds were transcribed, and in rough form the platter was tried out in ten schools; five hundred copies of the final transcription are in use.
6. The third book, *Fun in San Francisco*, was completed in March, 1949; 19,000 copies were printed.
7. The fourth book, *At Home in San Francisco*, was delivered to the schools in June, 1949.
8. The fifth and sixth booklets, *Early San Francisco* and *Work in San Francisco*, came from the press during the first term of the 1949-50 school year.
9. Another 200 sets of the eight film strips and plastic covered study prints were ordered.

A Cooperative Enterprise

This project is a good example of cooperation of governmental, educational, civic, philanthropic, and private business organizations.

The Rosenberg Foundation, of San Francisco, contributed $10,000 to the project on the basis of community betterment. This was supplemented by $8,000 of school funds. The $18,000 will finance the entire project. About $5,000 will be used for films, photographs, transcriptions, and study prints. Outside services call for $2,000, and the other $11,000 for printing costs.

A committee of teachers, with a competent principal as chairman, wrote the books under the general supervision of the assistant superintendent in charge of elementary education. The project has assumed the characteristics of an inservice education program. All of the work was done during spare time with the exception of three teachers leaving their classrooms for three weeks to work on copy. Although only twelve teachers are serving on the committee, many more have helped. For instance, it has not been uncommon for a cooperative story on the subject, developed in a classroom, to become a part of the final copy of a book.

Superintendent Herbert C. Clish has encouraged the project at every step with suggestions as well as administrative action.

The City Planning Commission, a branch of the local government, contributed the services of a staff artist. The chief of the Master Plan Division acted as contact man with the office of the assistant superintendent in charge of elementary education. One outside part-time consultant was employed to help in making contacts with other agencies for photographs, clearing information, arranging printing contracts, and so forth. As a regular city planning consultant, he gave help to the committee also in the planning and preparation of copy. A member of the San Francisco Planning and Housing Association also contributed valuable research material.

Scores of public agencies and private organizations provided photographs and information. Among these were banks, newspapers, manufacturing concerns, federal agencies, the departments of the city government, chambers of commerce in the Bay Area, tourist bureaus, trade publications, steamship companies, air lines, bus lines, and railroads. The police department cooperated by holding traffic to permit essential photographs to be taken. Ninety-six photographs were used in the film strips, and about nine or ten in each book. In addition, thirty-five prints were used in the classroom set of study prints.

Adapting the Materials

The films, textbooks, and other materials deal simply with all phases of the city — the people, the geography, the climate, the sections of the city, the way people make a living, recreation, transportation, and so forth. There is a bit of the "city of the future" in the material, expressed in a manner that is readily understood by younger children. The help of the City Planning Commission was reflected here. Every book is well illustrated with photographs and illustrations in from one to three colors. Simple maps of the city and Bay are included in the books.

The books are written with a vocabulary and concepts geared to the third grade. The type face was carefully selected for easy reading, and the size is appropriate for the eight-year-old child. Sentence and paragraph length meet the standards set by experienced publishers of primary books.

The colorful illustrations and photography are in keeping with the standards set for the text material.

The films, study prints, and sound transcriptions are closely correlated with the booklets. For instance, the second booklet, *In and Out of San Francisco,* which deals with transportation, opens with a passenger liner coming into San Francisco and the copy follows its movements to the dock. A film strip, *The Port of San Francisco,* follows the same route with a sequence of twelve photographs. The sound transcription includes the surf, tug boats, the whistle of the liner, fog horns, and similar sounds along the Bay.

Two elementary school supervisors prepared a teacher's loose-leaf guide to accompany the booklets, treating vocabulary, social studies concepts, and so forth. New sheets are supplied with each new booklet.

A group of third-grade teachers, working with one of the elementary school supervisors, will revise the teachers' guides this second semester, following their experiences with the materials. The new guide will then be printed.

The local institute program of last December included a demonstration by a third-grade class from the Winfield Scott School. The demonstration emphasized the use and correlation of the varied materials — films, books, study prints, and transcription.

Due to popular demand, the booklets are being made available at cost to other cities in the Bay Area. They may be ordered from the San Francisco Unified School District.

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Second Annual Conference on Educational Research To Be Held at Mills College

The 1950 Annual Conference on Educational Research, sponsored by the California State Advisory Council, will be held at Mills College, Oakland, California, on November 10 and 11. The First Annual Conference was held last October at Santa Barbara College and was well attended by research personnel. The Program Committee for the 1950 Conference will be: Dr. D. Welty Lefever, University of Southern California, chairman; Dr. Georgia S. Adams, Research Coordinator, Pasadena City Schools; Dr. David G. Ryans, University of California at Los Angeles; Dr. Harry W. Smallenburg, Director of the Division of Research and Guidance, Los Angeles County Schools; and Dr. Henry W. Magnuson, State Department of Education. Detailed information concerning the Conference will appear in a later issue of the *California Journal of Educational Research,* as well as in *California Schools.*

California School Administrative Codes—Their Use and Format

DAVID M. FLORELL
Lompoc Union Elementary and Union High School Districts
Lompoc, California

LITTLE attention has been given to the administrative code as an instrument of educational administration. Educational administration textbooks and literature make scant reference to it. This condition is reflected in the general neglect among school administrators to provide themselves with such codes adopted by their boards of education.

In practice an administrative code is a document which contains the general policies and rules and regulations of the governing board of education. It deals with the organization, administration and operation of the school system. Its purpose is to define and designate the structural organization of the school; duties, responsibilities and lines of authority or advisory capacity of personnel; rules and regulations regarding pupils and property; and the general policies to be followed by the staff in making decisions.

An administrative code helps immeasurably in facilitating the work of the school board, the administrators, the teachers, and other personnel. It lends a degree of desirable stability to the school system, for decisions based on policy are likely to be consistent. It should be designed to fit the needs of the school system in which it is to be used. Further, it must be developed within the framework of legal statutes and rules and regulations of the state education agency. Not least — the provisions of an administrative code should be based upon sound principles and practices of educational administration.

In the spring of 1947 the writer initiated a study of administrative codes in the public schools of California. Two purposes of the study were: (1) to determine the extent to which administrative codes were being used in the public schools and (2) to discover their format.

This study is confined to the public schools of California. Schools are grouped according to the size of the city in which they are located. The

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Dr. David M. Florell has been superintendent of the Lompoc Union Elementary School and Lompoc Union High School Districts since 1947. He had formerly taught in Minnesota, and served as district superintendent of the Owens Valley Unified Schools at Independence, California. Dr. Florell received his bachelor's and master's degrees from the University of Minnesota. His doctorate was awarded by the University of California at Los Angeles.

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following groups are used: Group I — cities over 100,000 population; Group II — 30,000 to 100,000; Group III — 10,000 to 30,000; Group IV — 5,000 to 10,000; Group V — 2,500 to 5,000; and Group VI — below 2,500. In selecting schools to be included in Group VI, two communities were arbitrarily chosen from each county so far as possible. All elementary, secondary, unified, and city school systems located in California cities of over 2,500 population are included in the study.

The Use of Codes

The results of this study have been tabulated by type of school district as shown in Table I. The one elementary school district in a city of 30,000 to 100,000 did have an administrative code. However, it may be noted from Table I that less than one half (42.8 per cent) of the elementary school districts reporting in cities of 10,000 to 30,000 had developed and adopted this administrative document. The percentage of these districts having such codes decreases with the size of the city in which the school is located.

TABLE I

NUMBER AND PER CENT OF PUBLIC SCHOOL SYSTEMS IN VARIOUS SIZED CITIES OF CALIFORNIA HAVING ADMINISTRATIVE CODES

Cities	Total Districts in Study	Total Districts Reporting	Districts Having Codes							
			Elementary		Secondary		Unified or City		Total	
			No.	%	No.	%	No.	%	No.	%
Group I										
Over 100,000	6	6	--	--	--	--	6	100.0	6	100.0
Group II										
30,000 - 100,000	16	15	1	100.0	1	100.0	10	77.0	12	80.0
Group III										
10,000 - 30,000	51	46	9	42.8	9	52.9	7	87.5	25	54.3
Group IV										
5,000 - 10,000	72	57	11	36.6	9	40.9	2	40.0	22	38.5
Group V										
2,500 - 5,000	90	72	5	14.7	4	13.3	4	50.0	13	18.0
Group VI										
Below 2,500	176	155	3	4.3	13	15.6	1	33.3	17	10.9

A study of the figures in Table I reveals that conditions in the secondary school districts are somewhat similar to those found in the elementary school districts. The one secondary school district in a city of 30,000 to 100,000 did have an administrative code. Only 52.9 per cent of the secondary school districts reporting from cities of 10,000 to 30,000 had a code of this kind. This is approximately 10 per cent higher than for elementary school districts in similar sized cities. The percentage of secondary

school districts having this code decreased almost in relation to the size of the city in which the district is located.

All schools in city and unified school districts located in cities of over 100,000 reported having adopted administrative codes. In contrast to this, only 33.3 per cent of unified schools in communities below 2,500 population reported having done so. However, this percentage is nearly eight times greater than for elementary schools and approximately twice that for secondary schools located in similar sized communities. Unified school systems are usually larger than either elementary or secondary schools in similar sized communities — a factor which may explain in part why generally a larger percentage of unified schools have adopted administrative codes, regardless of the city group in which comparisons are made.

The composite picture of the use of administrative codes in all the public schools of California is also shown in Table I. The percentage of school systems having administrative codes varies directly with the size of the cities in which they are located. Only in cities of over 10,000 population do more than one half of the school systems have administrative codes. All school systems in cities of 100,000 population or more have this document. The percentage declines to 10.9 for schools in communities below 2,500 population.

The results of this study showing the use of administrative codes in the public schools of California are not encouraging. A little encouragement may be had from reports of some school administrators that an administrative code was in the process of being developed. The lack of such an instrument of administration does not in itself mean that, in school systems where this condition exists, the schools are poorly managed or governed. In a school system where no code exists the school board may follow an unwritten policy based upon earlier decisions.

Format of Codes

During the course of this study a number of codes were collected from various sized school systems. However, it was not possible to secure codes from all schools. The administrative codes examined and studied were largely from schools in cities of over 5,000 population. A total of 31 codes were included in this study.

A perusal of the documents reveals a wide variety of characteristics. A school administrator or school board interested in developing and adopting an administrative code must answer such questions as these: *What size shall it be? Shall it be bound or unbound? Shall it be printed, typed, or mimeographed? Shall it have a title page, foreword, table of contents, index and adoption date? What shall be its length?* Not all of these are equally important, but in determining the format perhaps most of them

should be considered along with other characteristics. The tabular analysis below shows the frequency of certain characteristics of codes used in various sized California school systems.

One striking fact from Table II is that 19 of the 31 codes examined, or 61.2 per cent, were 8½" x 11" in size. Odd sizes were most frequently smaller — the smallest being 3⅞" x 6". There were no codes larger than 8½" x 11".

Whether an administrative code is to be bound or unbound is also a practical matter which the administrator or school board must determine. Approximately one half (48.3 per cent) of all codes are bound; the remainder are unbound.

For the sake of usability, administrative codes should be bound. The greatest flexibility is secured through the use of a loose leaf binder which facilitates modifications and additions.

To what extent are the codes printed, typed, or mimeographed? Table II reveals that 21, or 67.7 per cent of the codes examined were typed or mimeographed. They were most frequently the latter. Eighty per cent of all printed codes came from schools located in cities of over 10,000 population. Although the most common size of codes is 8½" x 11", none of this size was printed. All printed codes were bound, as might be expected.

TABLE II

FORMAT OF THIRTY-ONE SCHOOL ADMINISTRATIVE CODES

	POPULATION OF CITY							
	Group I Over 100,000	Group II 30,000-100,000	Group III 10,000-30,000	Group IV 5,000-10,000	Group V 2,500-5,000	Group VI Below 2,500	Total All Codes	Per Cent
No. of Codes	4	7	6	4	6	4	31	100.0
Characteristics								
Size, 6" x 9"	3	0	1	0	1	0	5	16.1
Size, 8½" x 11"	1	4	4	4	2	4	19	61.2
Other Sizes	0	3	1	0	3	0	7	22.5
Bound	3	6	2	0	4	0	15	48.3
Unbound	1	1	4	4	2	4	16	51.6
Printed	3	3	2	0	2	0	10	32.2
Typed or Mimeo.	1	4	4	4	4	4	21	67.7
Title Page	4	5	5	0	3	1	18	58.0
Foreword	3	3	3	0	2	1	12	38.7
Table of Contents	4	5	5	1	3	1	19	61.2
Index	3	1	2	0	1	0	7	22.5
Adoption Date	4	6	6	3	4	1	24	77.4
Page Range — Single Side	39	8-89	25-129	3-30	6-52	2-25	2-129	
Page Range — Two Sides	26-69	16-39	19-53	0	20-23	0	16-69	

Table II reveals that 58.0 per cent of the 31 codes examined possessed a title page. Its inclusion adds to the completeness of the document by frequently giving information concerning membership on the board, location of administrative offices and other pertinent data.

It may be noted further that 38.7 per cent of the codes included a foreword or introductory statement. Such a foreword most frequently states the purpose of the code, its development, its use to school patrons and school personnel, and acknowledgements of assistance in its preparation.

A table of contents was found in 61.2 per cent of the codes studied. This is an important part of a document and should not be omitted.

An index was found in only 22.5 per cent of the codes. While perhaps not as important as a table of contents, it can be of great assistance in finding reference to an item in a more voluminous document.

The date of adoption was stated in 77.4 per cent of the administrative codes analyzed. These dates ranged from 1939 to 1946. For purposes of record, the adoption date and dates of revisions should be included.

It will be noted from Table II that the codes vary a great deal in length. Typed or mimeographed codes reveal a greater range in length than do printed codes, the former from 2 to 129 pages and the latter from 16 to 69 pages.

The findings of this study reveal that no one size of code is common to all schools. Although 8½″ x 11″ is most common, printed copies were always smaller. For printed codes size 6″ x 9″ was most frequently found.

No definite trend in length of codes is detectable. The greatest range in length appears in typed or mimeographed codes. Length appears to depend upon a number of factors, including size of the school organization, scope of matters included, and the detail in stating school policies and rules and regulations of the board.

(A second article by Dr. Florell, on "California School Administrative Codes — Their Contents," will appear in the May issue.)

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The most important single factor affecting teacher morale, according to 1,600 school people who were recently consulted, was strong administrative support to the teacher in discipline problems. Other items considered important were: belief in and enjoyment of teaching, a just and adequate salary plan, courtesy and respect from students, and a pension plan. Ranking low in importance were such items as: community financial and moral support of the educational program, equitable teacher load, long-range planning by the board of education, good interfaculty relations, and reasonable social freedom for the teacher. The complete study by Leipold and Yarbrough is reported in the December, 1949, *School Board Journal.*

Teacher Behavior Most Disliked by Students

H. B. Long and Lloyd Farley
Gilroy Public Schools

There have been previous studies of pupil attitude and response to teacher performance, but a novel combination of techniques applied to classrooms in the schools of Gilroy, California, has discovered new data for teachers and teacher education schools to examine. The novelty and originality of the study lay in the extensive use of the sociodrama technique, which was validated by records of informal remarks, nondirective guidance, and interviews. It is believed that our practice of recruiting and of training teachers largely in terms of adult criteria is challenged by an analysis of the likes, dislikes, and opinions of pupils relative to the behavior of the teachers they have or know. Given due weight in evaluating teaching effectiveness, pupil opinions, even though from immature minds, are consumer judgments and are also effective public relations reports to the community on the school program.

The purpose of the study was to determine the teacher behavior traits most disliked by the pupils in all public school grades from kindergarten through high school. Although favorable comments greatly outweighed negative comments, only the latter were recorded. Pupil responses were spontaneous, informal, and unsolicited; pupils were not aware that their opinions were being recorded. The opinions were obtained in a natural, normal social setting.

How the Sociodrama was Used

The experiment in sociodrama was carried on in the regular classroom in grades seven through twelve. In the sixth grade and below it was found necessary to take the actors to another classroom or to the teachers' study

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Dr. Harold Boyd Long and Dr. Lloyd Edward Farley, district superintendent and high school principal, respectively, at Gilroy, California, exemplify the ideal working relationship of professional colleagues. They collaborated on this joint doctoral study which was completed at Stanford University in June, 1949. Dr. Long, prior to his present position, has served as district superintendent at Hayward Union High School, principal at Manteca Union High School and at Princeton Joint Union High School. He taught also in Kansas and Utah. Dr. Farley began teaching in Nebraska and came to California following a long period of service in the U. S. Army during World War II. His war service included duty as director of teacher training for Korea, and district education officer at Okinawa. Dr. Farley was principal of the Esparto (California) Union High School before he assumed his present position at Gilroy in 1948.

room. This change was made necessary by the fact that the audience was so anxious to act that nothing but confusion took place. Six or seven pupils in a room by themselves, however, were very natural in acting out their sociodrama plot.

The teacher of the class would not know that the observers were coming until they arrived. The observers were introduced to the teacher and the pupils by the principal of the school. He told them that the observers would have charge of the class for a short time, and when they finished the teacher would return to the room.

After the principal and teacher had left the room one of the observers would give a short talk on how classes were taught in their parents' day. He would discuss some of the methods used, and why some were better than others. He would explain that in the past few years a new training technique known as sociodrama had been used. He further explained sociodrama and asked if they would like to try the new technique in their class. They showed an eagerness to do so.

The observer explained that each pupil would participate in a sociodrama as player or audience and all would have an opportunity to play a part. He next gave a general idea of the plot to be followed and stressed the necessity of each actor playing his part as he thought it should be played. Often the students helped to select the characters for the sociodrama thus outlined. He emphasized the fact that there would be no script, no rehearsals, and an imperfect stage setting. Everyone would have to imagine certain things, but his imaginings should be based upon real life situations. The actors were instructed to continue with the sociodrama until they had reached a successful solution to their problems, then terminate the situation.

The basic sociodrama plot selected for all grades was briefly this: On a Friday after school the teacher telephoned parents to inform them of something the student was not doing properly. The parents had visitors. The student with two or three friends arrived home shortly after the telephone conversation and asked permission to go to a party, athletic event, or movie, with a request for money or the family car. The basic plot was varied appropriately for the various age levels in the total group of 1678 pupils for whom responses were recorded.

From this point on the sociodrama took many interesting forms. It never failed to progress, and generally proceeded another five to thirty minutes. In every instance the teacher and his teaching was the main topic for discussion. The observers were free to record all pertinent data. Fifteen hundred and thirty-nine comments on negative behavior of teachers were recorded, which were later classified into twelve categories. Most of the comments were very interesting and picturesque.

Are Sociodrama Results Valid?

One check on the validity of the sociodrama technique is furnished by comparison with the results from more traditional methods of obtaining opinions. Informal remarks about their teachers by 120 high school students were recorded. Also, teacher behavior disliked by 439 high school students, voiced during nondirective counseling conferences, was noted. These 439 high school students were then given the opportunity to take part in a series of sociodramas concerning learning and teaching. Opinions of negative teacher behavior voiced by the participants in these sociodramas were also recorded. The ninety seniors in the high school were then interviewed by a trained interviewer about the behavior they disliked of their teachers.

All methods used tended to give the same results. Remarks made by a student during a sociodrama situation were olmost identical with the remarks made to friends at a football game, to his counselor, or to the interviewer. The sociodrama situations were then used from grade eight down through the kindergarten.

Teacher Behavior that Has Little Effect upon Pupils

Writers have led us to believe that personality, physical appearance, personal appearance, and voice are important qualifications for teachers. This study shows that students place little emphasis on these characteristics. In all of the comments, not a single one reflected upon the physical appearance of the teacher or non-certificated employee. His physical appearance had nothing to do with what the students thought of him, as far as could be ascertained. These results might be due to the fact that all of the teachers had been well screened. It possibly means that teacher training institutions and administrators are extremely conscious of these characteristics and are doing a good job in placing teachers who have acceptable physical and personal appearance, pleasing personalities, and good voices. The fact still remains that students are considerably more critical of other negative characteristics of teachers.

Teacher Behavior that Students Dislike most

A tabular summary of teacher behavior disliked by the 1678 pupils in this study appears in Table I. The students disliked most that teacher behavior which may be called "poor teaching technique, including organization, explanation, and class control." Four hundred thirty-eight comments or over one fourth of those made were categorized under this heading.

The fact that "poor teaching technique" appears in first place in the comments about undesirable teacher behavior casts a reflection beyond

the teachers to whom these students referred. It reflects upon the administration of schools, teacher training institutions, and the society which has made teaching so much less attractive than other professions.

TABLE I

TEACHER BEHAVIOR DISLIKED BY 1678 PUPILS, GRADES KINDERGARTEN THROUGH SENIOR HIGH SCHOOL — CLASSIFIED BY SEX AND ELEMENTARY AND SECONDARY SCHOOL

Behavior Disliked	Elementary Boys Frequency of Mention	Rank	Elementary Girls Frequency of Mention	Rank	High School Boys Frequency of Mention	Rank	High School Girls Frequency of Mention	Rank
1. Poor teaching technics, including organization, explanations, and class control	87	3	106	3	137	1	108	1
2. Partiality — favoritism	38	6	30	6	11	7	16	5
3. Not fair, unjust	41	4	59	4	31	3	24	3
4. Failure to arouse pupil interest	40	5	29	7	28	4	48	2
5. Creates feeling of insecurity and/or fear	92	2	115	1	19	5	8	7
6. Corporal punishment	145	1	110	2	0	11.5	0	11.5
7. Lack of rapport	13	9	4	9	10	8	18	4
8. Lack of courtesy	18	7	20	8	7	9	5	8
9. Disposition	16	8	32	5	17	6	12	6
10. Lack of knowledge of subject matter	1	11	0	12	33	2	1	10
11. Poor personal appearance	2	10	1	10.5	0	11.5	0	11.5
12. Lack of cooperation	0	12	1	10.5	4	10	2	9

The following conclusions from the data in Table I appear to be valid:

1. There is still a significant dependence upon corporal punishment, fear, and insecurity in teacher classroom management. This must be pointed out in contrast to our profession of democracy and our provision for individual development and opportunity.
2. To a significant degree the teacher, or the teacher in the classroom situation,

fails to arouse pupil interest. Perhaps this problem would be more justly defined as "the teacher *and* the classroom situation"; perhaps just "the classroom situation." Nevertheless, the teacher, as the active human factor, must accept responsibility for motivation.

3. Too many teachers are unfair, unjust, and partial. This behavior destroys a pupil's faith not only in schooling but in society itself. To the student the teacher represents the leader for *all* the class, the living example of democracy. If the teacher fails to live up to this expectation, then many children are disillusioned in school.

Negative Teacher Behavior Follows a Definite Pattern

This study shows that the negative behavior of the various teachers follows a fairly repetitive pattern. A very definite pattern appears for each individual teacher. Most of the teachers were well liked by their pupils; however, all teachers had one or two types of behavior that were disliked by significant proportions of the students in their classes.

It is interesting to note that boys and girls tended to agree about the behavior they disliked in their teachers. Also, students tended to be in close agreement regardless of their school achievement, whether average, above, or below average. However, below average students made fewer comments about their teachers than did average or above average students.

Likewise, students of all ages and grades — kindegrarten through the senior high school — were in general agreement regarding the negative behavior of their teachers. It seems to make little difference as to the age, grade, sex, or achievement of the students — all tend to dislike the same teacher behavior, with few exceptions.

There was no dislike of corporal punishment in the high school, since corporal punishment is not used in these grades. Elementary pupils, of all grades and both sexes, disliked corporal punishment extremely.

Another variation was the fact that high school students put more stress on good teaching techniques than do elementary pupils, although even kindergarten pupils mentioned poor teaching techniques. Boys were a little more critical of poor teaching techniques than were the girls.

Significance for Policy

Our present day curriculum is teaching pupils to be critical of events and persons around them. The present study indicates that pupils are fair and just rather than petty or juvenile. Of the entire body of criticism, 95 per cent was directed toward the teacher who was not living up to the teacher ideal, either because he was not democratic or was not a leader. Today pupils want a teacher who is a democratic leader. Studies such as this can help administrators and teacher training institutions locate and train these desired teachers.

Suggested Research Problems

Relating to Teaching Efficiency and Success

(Proposed by Dr. David G. Ryans, University of California at Los Angeles)

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1. What is the relation between the amount of education and teaching success?
2. How is the amount and kind of supervision related to teaching effectiveness?
3. Does teaching effectiveness vary with administrative organization?
4. What is the nature of the relationship between length and kinds of experience and teaching effectiveness?
5. How does the teaching effectiveness of married and unmarried women compare?
6. How reliable and how valid are the various procedures employed in rating teachers?
7. What weights should be assigned to the various factors in selecting teachers for different types of school systems and different school situations?
8. To what extent are professional education courses effective in contributing to teaching success?
9. What are the criteria of good teaching?
10. What is the relationship of the possession of measurable intellectual qualities to teaching success?
11. What is the relationship of the possession of measurable personal qualities to teaching success?
12. What is the relationship of subject matter mastery to teaching success?

Book Reviews

Growing Points in Educational Research

1949 Official Report, American Educational Research Association, National Educational Association, Washington, D.C., 340 pp.

This publication, the eighth annual report of the meetings of the American Educational Research Association, includes the research reports which were presented at the 1949 meetings of the Association held at San Francisco, St. Louis, and Philadelphia. The fifty-four articles cover varied subjects which, for convenience, are classified under the following headings: (1) general. (2) elementary education, (3) administrative, (4) adult education, (5) curriculum, (6) research procedures, (7) social learning, (8) teacher education, (9) educational problems in large school systems, (10) current research as illustrated by selected studies, and (11) child development. The last three topics were used as themes of symposium discussions at the Philadelphia conference.

Many of the 54 articles have practical application and should be of special interset to teachers and school administrators as well as to research personnel. Supervisors will find stimulating reports on the teaching of various elementary school subjects. *Growing Points in Educational Research* presents a galaxy of research articles to appeal to all tastes.

Guide to Research in Educational History

By William W. Brickman

New York: New York University Bookstore, 1949, 220 pp.

Students of the history of education should welcome this effective *Guide*. An excellent classified and annotated bibliography (42 titles) is functionally incorporated in chapters dealing with "The Preliminary Search for Information," "The Search for Source Materials," and "Aids in the Writing of History." Well-chosen specific examples make the discussion of "Applying the Historical Method of Research to Education" particularly useable. The treatments of "Special problems of historical research in education" (dating, sources of an educational idea or book, determination of primacy, institutional origins, establishment of influence, determination of authorship, etc.), "Interpretation," and "Synthesis" (selection of data, chronological sequence, topical arrangement, causality, historical trends, etc.) are noteworthy. Chapters on "Note-Taking and Documentation," "The Technique of Presentation," and "Evaluation of the Research Report in Educational History" also are included.

Occupational Outlook Handbook

Bulletin No. 940, Bureau of Labor Statistics, United States Department of Labor, Washington 25, D.C., 453 pp.

Prepared in cooperation with the Veterans' Administration, this handbook contains essential employment information on major occupations. It was prepared for use in guidance and is designed for schools, colleges, Veterans' Administration regional offices and guidance centers, employment service offices, community organizations, and other agenices engaged in the vocational guidance of young people, veterans, and workers.

For each profession and occupation covered, the following items of information are given: (1) nature or description of the work; (2) training and qualification requirements; (3) occupational outlook; (4) earnings; and (5) where to get more information. Preliminary chapters deal with the use of the Handbook, economic and occupational trends, population and labor forces, and industrial and occupational trends.

The Handbook should be invaluable to school guidance personnel. It is undoubtedly the most complete and authoritative source of information on occupational opportunities. It is priced at $1.75.

"Teacher Personnel"— *Review of Educational Research*

Vol. XIX, No. 3, Washington, D.C., June, 1949, 101 pp.

This issue of the *Review of Educational Research* presents a survey and compilation of studies of teacher personnel for the three-year period, June, 1946 to June, 1949. The issue is jam-packed with significant summaries of hundreds of studies related to teacher personnel. The studies are classified under the following headings: (1) supply and demand in teaching; (2) measurement and prediction of teaching success; (3) recruitment, institutional selection, and guidance of teachers; (4) preservice preparation of teachers; (5) local selection, placement, and administrative relations; (6) inservice education of teachers; (7) preparation of college teachers; (8) teaching load and assignments; (9) teachers' salaries, pensions, and retirement pay; (10) teacher certification; (11) legal status of teachers; (12) teachers' ossociations, organizations, and unions; and (13 welfare of the individual teacher.

This issue of the *Review* contains concise summaries of teacher personnel studies and represents a distinct contribution to the literature needed by research people. Of special interest will be the extensive bibliographies to be found at the end of each chapter.

Early School Leavers—A Major Educational Problem

By Harold J. Dillon

National Child Labor Committee, New York 16, N. Y., Publication 401, October, 1949, 94 pp.

This monograph, published by the National Child Labor Committee, reports on a study of 1,360 early school leavers in five communities of the Midwest. Its purpose was to discover why so many boys and girls leave school for employment before they complete their high school course. The study sought to answer the following questions:

1. As a result of careful study of the school records, information from teachers and from the individuals themselves, do recognizable trouble signs emerge that will be helpful in detecting vulnerability to early school leaving?
2. How may cumulative records be more effectively used in detecting maladjustment or failure patterns among the potential school leavers?
3. Among early school leavers, is there a significant number who could profit from further education?
4. What counseling services may be needed for effective results in holding youth in school?
5. At what grade level should counseling services begin if they are to be more effective in keeping youth in school?
6. Is an adequate system of clearance provided for sharing the information about a student obtained by teachers, counselors, attendance workers, work-permit issuing officers, and the school nurse?
7. Are explanations for dropping out of school, given by the youth and appearing on school records, the real *reasons* or merely *excuses* for leaving school?
8. Does changing from one environment to another (transfer from one school or community to another) influence decisions to leave school?
9. What process does youth go through in severing his connection with the school? Is counseling offered to him? Are his parents interviewed? Is his decision to leave school known by school personnel at a time when effective help may be given to him?
10. What curriculum and/or instructional reorganization may be needed to provide the types of experience adapted to interests and abilities of individual students?
11. In what ways may more adequate occupational information become effective?

The data for the study were secured from three sources: school records, teachers, and personal interviews with each of the 1,360 students. The author concludes that there are seven symptoms of vulnerability which can be used to predict early school leaving. A number of recommendations are offered, most of which will be familiar to school counselors. The monograph is well-written and easy to read.

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Research News and Views

The California Association of School Administrators announces the publication of two studies which were prepared under its sponsorship: (1) *Lay Advisory Committees to Boards of Education in the United States,* and (2) *The People and the Schools of California.* The former, a 26-page publication, was prepared by Dr. J. H. Hull, Superintendent of Torrance Public Schools, and is based on a research study of the "Lay Advisory Committee" movement in America. The report describes how such lay committees are organized, their function and purpose, how they work, and results obtained. The latter publication, the First Yearbook of the Association, includes a report of a year's study of best practice in 250 public school systems in dealing with problems of lay participation, lay understanding, and lay support for the program of public education in California. This study of 125 pages was directed and edited by Dr. Theodore L. Reller, Professor of Education, University of California at Berkeley. The publications may be ordered from the California Association of School Administrators, 35 North Raymond Avenue, Pasadena 1, California. Price of the Yearbook is $1.75, and the smaller publication, 50¢. Quantity prices are furnished on request.

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More than 35 per cent of the total cost of public elementary and secondary schools is now being paid by the states, according to the NEA Research Department. The per cent has risen steadily from an average of 17.2 in 1929-30. The same report (*State Legislation Affecting School Revenues, 1944-1948*) notes other trends affecting public education: (1) teachers' salaries, despite increases, still compared unfavorably in 1948 with those which were available in other occupations requiring similar qualifications; (2) a shortage of qualified teachers which developed during the war years is only slightly reduced; (3) increased capital outlays will be needed over a period of years before deficiencies in the school plant, resulting from wartime neglect, can be corrected; (4) increased enrollments in the elementary schools, which will also reach the high schools during the next decade, will necessitate further expansion of instructional staffs and school building facilities. These conditions lead to the logical conclusion that the states will have to provide more liberal aid than ever before if children are to be given a satisfactory standard of education, contends the NEA Research Department.

A program of general education for the junior colleges of California will be developed within the next two years by the California State Junior College Association and the School of Education, University of California at Los Angeles. This project has been made possible by the securing of a grant of $30,000 from the Carnegie Foundation. The project embraces workshops at the University of California, Los Angeles, during the summer sessions of 1950 and 1951, a number of regional conferences to be held on the campuses of junior colleges located in all sections of the State, state meetings of junior college leaders, and participation of faculty groups from all junior colleges of the State. The project is expected to culminate in the development of a charter or statement of fundamental ideas and philosophy which will serve as the basis for the organization and development of general education, including curriculum, guidance, student activities, and all phases of the educational program.

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State aid varies from 4 per cent of school costs in Nebraska to 89 per cent in Delaware. It is above 50 per cent in 15 states, and below 20 per cent in 11 states. No state was spending as high a per cent of income in 1948 as in 1940.

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Sweeping changes in important taxes were made by state legislatures in 1949, according to the United States Chamber of Commerce, and all the changes were upward. In addition, six states tapped new sources of revenue through new major taxes. A summary of the tax changes effected by the 1949 legislatures, as reported by the U. S. Chamber, shows:

Source of Taxes	Number of States Increased	Number of States New
Gasoline	15	0
Cigarettes	9	2
Liquor	10	1
Personal Income	8	0
Corporate Income	6	0
Sales, Gross Income, and/or Use	4	3

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The NEA Educational Research Service, in its annual bibliography of questionnaire studies (Bibliography No. 20, Circular No. 10, November 1949), reports that the number of questionnaire studies for which they have information has dropped for the first time in five years. The number of such studies reported to the Educational Research Service rose from 225 in 1944-45 to 522 in 1947-48. For the past year, 1948-49, the number dropped to only 450 questionnaires. The bulletin classifies 112 of the studies which were submitted to the NEA under appropriate subject-headings, and presents a brief annotation of each. Thirty-three of the references pertained to salary and salary schedule studies.

All but two of the 20 largest city school districts in the United States have schedules of the single-salary type in 1949-50, according to the NEA Research Division. This represents a recent development, as in 1939-40 only four had single-salary schedules. In 1944-45, the number using single-salary schedules rose to 7, while at present 18 cities now use them.

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Many California county, city, and individual schools have indicated interest in participating in the California Cooperative Study of School Drop-Outs and Graduates. This project is being organized by the State Department of Education as the result of suggestions from committees representing various state professional groups and will run through the 1950-51 school year. Participation is open to all schools in the state which are interested in carrying on a study of young people who graduate from or drop out of school.

The purpose of the study is to secure more adequate information than is now available concerning such prbolems as: How many young people drop out of California schools before graduating from high school or junior college? What are the reasons why young people leave school before graduation? How can potential drop-outs be recognized before they actually leave school? How much unemployment exists among recent drop-outs and graduates? What occupations do young people enter upon leaving school? How do former students think the schools could have served them more effectively?

Projects already underway include such studies as the following: One county office, in cooperation with eight high schools, is making an intensive interview-type study of the first 100 tenth grade students dropping out of school this year. Several junior colleges and high schools are making studies of drop-outs through terminal interviews with all students leaving school. One state professional group is organizing an extensive study of continuation school students in an effort to discover why they left the regular program. A large city system recently completed a pilot study of a sampling of 2,000 high school graduates in order to set up procedures for carrying on a regular follow-up study program in all secondary schools. Another large city system is working out arrangements with a state college under which graduate students will carry on follow-up studies as thesis projects under the supervision of the city school research department.

A mimeographed bulletin giving full information concerning the Cooperative Study has recently been distributed to all county and city superintendents and to all secondary schools within the state. Schools interested in participating are invited to contact the State Department of Education, Bureau of Occupational Information and Guidance, Sacramento 14, California.